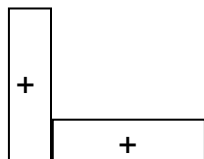


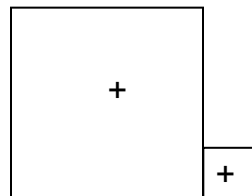
Perimeter Puzzles with Algebra Tiles

Build each shape with algebra tiles. Find the perimeter and record. Be ready to justify your answer.

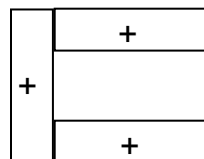
1.



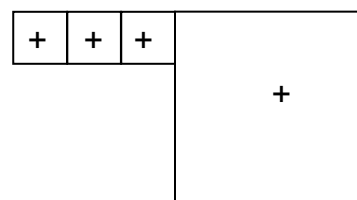
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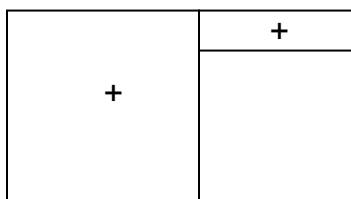
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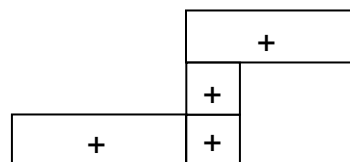
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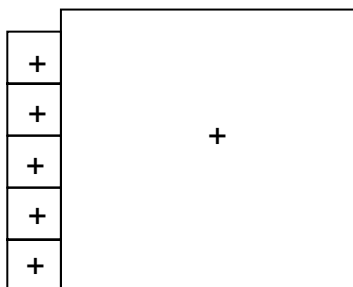
5.



6.



7.



8. Create your own puzzle and find the perimeter.

Perimeter Puzzles

Working in pairs, students use algebra tiles to model geometric shapes, find the perimeter of the shapes, and write the expression for the perimeter in simplest form by combining like terms. Introduce the Perimeter Puzzles by placing the shape in #1 on the overhead using algebra tiles. Allow students to work in pairs using the manipulatives. Require the students to write out the entire expression for the perimeter and then simplify. To extend this activity, students can create a puzzle and exchange with others.

Solutions to

1. $3x + (x - 1) + 3 = 4x + 2$
2. $3x + (x - 1) + 3 = 4x + 2$
3. $5x + (x - 2) + 4 = 6x + 2$
4. $3x + (x - 1) + 7 = 4x + 6$
5. $3x + (x - 1) + 2x + 1 = 6x$
6. $3x + (x - 1) + 9 = 4x + 8$
7. $3x + (x - 5) + 7 = 4x + 2$